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10/523,069

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04/13/2009

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EXAMINER

BELLINGER, JASON R

ART UNIT

PAPER NUMBER

3617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/523,069 | Applicant(s) TANNO, ATSUSHI | |
| | Examiner Jason R. Bellinger | Art Unit 3617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation in lines 8-11 of claim 1, setting forth that the ring-like element increases the natural frequency of the wheel such that the natural frequency of the wheel is in a higher frequency band than that of the tire, is not present in the specification as originally filed. Therefore, this limitation is considered to be new matter.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinoli in view of Atwell, Jr. and in further view of Archibald. Martinoli shows a disk wheel, wherein the rim 12 includes inboard and outboard bead seats with a bead hump and radially outwardly extending flanges 17-18. A solid and continuous single

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ring-like element 22k (see Figure 14) extends circumferentially around the wheel, and may be provided on a portion of the bead seat located between the hump and the flange of the rim 12 (in this case ring element 22k would be substituted for rib 22 shown in Figure 4). The ring-like element 22k protrudes inwardly from the radially inner surface of the rim 12, and could be the only ring-like element provided thereon (see column 2, lines 61-65). The wheel is formed of magnesium or aluminum or another lightweight metal. As shown in Figure 4, the surfaces of the ring-like element 22 (and specifically portion 23) are co-planar with the surfaces of the rim flange 17. The co-planar surface is generally orthogonal to the central rotational axis of the wheel.

Martinoli does not specify that the cross-sectional area of the ring element 22k is 0.1-0.4 times larger than the cross-sectional area of the thickness of the rim flange plus the width-wise length of the bead seat multiplied by the thickness of the rim adjacent the hump. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the ring-like element of Martinoli with a thickness sufficient to prevent the weight 21f from being dislodged during operation, and to serve as a reinforcing rib to distribute forces imparted on the rim.

Martinoli does not show the ring-like element being located at the inboard bead seat of the rim 12. Atwell, Jr. teaches the use of a ring-like element 20 located at the inboard bead seat of a wheel 10. Therefore, from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the ring-like element of Martinoli at the inboard bead seat area of the rim, for the purpose of increasing the aesthetic appearance of the wheel by moving balance weight from the

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exterior surface of the wheel, and further to protect the balance weight from damage and/or removal in the event of contact with an obstacle such as a curb.

Martinoli as modified by Atwell, Jr. does not show only a single ring-like element located on the rim. Archibald teaches the use of a wheel having a rim with a single ring-like element 64. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the wheel of Martinoli as modified by Atwell, Jr. with only a single ring-like element thereon in order to reduce the complexity of the design of the wheel, thus reducing maintenance costs, and further reduce the weight of the wheel. Namely, one of ordinary skill in the art at the time of the invention would have found the use of a known technique to improve similar devices in the same way would yield predictable results. In this case, Archibald teaches providing only a single ring-like element on a rim, which would reduce the overall weight of the wheel. Atwell, Jr. shows a rim having a pair of ring-like elements. One of ordinary skill in the art would find it obvious to remove the second ring-like element of Martinoli as modified by Atwell, Jr. in order to reduce the weight of the wheel. See *KSR International Co. v. Teleflex Inc.* 550 U.S. ___, 82 USPQ2d 1385 (April 30, 2007).

The limitation of the ring-like element increasing the natural frequency of the wheel to be in a frequency band higher than that of a tire mounted on the wheel is considered to be new matter (see section 2 above), and therefore Martinoli as modified by Atwell, Jr. and Archibald is considered to meet this limitation, inasmuch as the Applicant's invention.

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5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atwell, Jr. in view of Archibald. In Figures 4 and 4A, Atwell, Jr. shows a disk wheel 10 with a rim 16 located at the peripheral edge of the disk 14. The rim 16 includes inboard and outboard bead seats with a protruding hump and radially outwardly extending flanges. A ring-like element 18 circumferentially extends from the rim 16, and is located between the hump and inboard rim flange. The inboard annular rim flange includes an inboard facing surface that is generally co-planar with an inboard facing surface of the ring-like element 18. The ring-like element 18 is only provided on the inboard bead seat portion.

Atwell, Jr. does not specify that the cross-sectional area of the element 18 is 0.1-0.4 times larger than the cross-sectional area of the thickness of the rim flange plus the width-wise length of the bead seat multiplied by the thickness of the rim adjacent the hump. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the ring-like element of Atwell, Jr. with a thickness sufficient to prevent the weight 26 from being dislodged during operation, and to serve as a reinforcing rib to distribute forces imparted on the rim.

Atwell, Jr. does not show only a single ring-like element located on the rim. Archibald teaches the use of a wheel having a rim with a single ring-like element 64. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the wheel of Atwell, Jr. with only ring-like element 18 thereon in order to reduce the weight of the wheel. Namely, one of ordinary skill in the art at the time of the invention would have found the use of a known technique to improve similar devices in the same way would yield predictable results. In this case,

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Archibald teaches providing only a single ring-like element on a rim, which would reduce the overall weight of the wheel. Atwell, Jr. shows a rim having a pair of ring-like elements. One of ordinary skill in the art would find it obvious to remove the second ring-like element 18 of Atwell, Jr. in order to reduce the weight of the wheel. See *KSR International Co. v. Teleflex Inc.* 550 U.S. ___, 82 USPQ2d 1385 (April 30, 2007).

Response to Arguments

6. Applicant's arguments with respect to claims 1 and 8-13 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments filed 19 December 2008 have been fully considered but they are not persuasive. Applicant noted that the Martinoli reference was not cited on a PTO-892 during a phone conversation with the Examiner. A record of an 892 listing the Martinoli reference dated 9/13/08 is found in the ePhoenix Reference Manager tool; however, it appears that the 892 was never mailed to the Applicant or scanned into the system. Therefore, a new PTO-892 citing the Martinoli reference has been attached to this Office Action.

The Applicant argues that rib 22k of Martinoli is only disclosed as being capable of being substituted for rib 22a and not rib 22 of Figure 4. However, it would be obvious to one of ordinary skill in the art that rib 22k could be substituted for either rib 22a or rib 22, given the fact that both ribs 22 and 22a have identical structure. Since Martinoli states that rib 22k may be substituted for rib 22a, which has the same structure as rib

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22, one of ordinary skill in the art would find it obvious that rib 22k could be substituted for rib 22 also, dependent upon the type of weight to be used, etc.

The Applicant argues that neither Martinoli nor Atwell, Jr. show the use of a single rib. However, Archibald teaches this feature.

The Applicant argues that moving the rib of Martinoli to extend radially inwardly of the inboard rim flange, as taught by Atwell, Jr. would have caused one of ordinary skill in the art to follow "the other teaching of Atwell related to ribs, which is that two ribs must be included". However, it should be noted that the references were not literally combined. Atwell, Jr. was only used to teach the location of the inboard rib.

The Applicant argues that Martinoli does not disclose the cross sectional area of the rib. However, it should be noted that motivation was provided in the rejection above why one of ordinary skill in the art would find this limitation obvious.

The Applicant argues that Martinoli lacks any disclosure of the ring being solid or that it "increases the natural frequency of the wheel". First, it should be noted that ring/rib 22k is disclosed as being continuous, and is thus solid (column 6, lines 4-5 of Martinoli). Second, the limitation of the ring/rib increasing the natural frequency of the wheel is considered to be new matter, which is not supported by the original disclosure.

The Applicant argues that Atwell, Jr. does not show the ring being "completely and continuously co-planar" with the inboard rim flange. However, both the flange and the ring-like element 20 of Atwell, Jr. include radially extending, inboard facing surfaces which are "generally co-planar" with each other. The fact that the flange and ring-like element 20 extend at an angle to each other does not mean that they are not "generally"

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extending in a common plane. To be considered co-planar, two elements must have at least one point on each element that falls within a common plane. Atwell, Jr. meets this limitation.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference shows a wheel having a single wheel balancing weight mounting rib.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason R Bellinger/
Primary Examiner
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